



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,290	01/13/2004	Ilonka Harezi	P00783-US-01 (20476.0001)	4481
22446	7590	06/15/2007	EXAMINER	
ICE MILLER LLP ONE AMERICAN SQUARE, SUITE 3100 INDIANAPOLIS, IN 46282-0200			ROANE, AARON F	
			ART UNIT	PAPER NUMBER
			3739	
			MAIL DATE	DELIVERY MODE
			06/15/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/757,290	HAREZI ET AL.	
	Examiner	Art Unit	
	Aaron Roane	3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 21-23, 25 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 27 is/are rejected.
- 7) ☒ Claim(s) 20, 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plurality of tubes each with their first and second ends recited in claim 27 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6-10, 13, 15 and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Feldman et al. (USPN 5,896,004).

Regarding claim 1, Feldman et al. disclose a bulb comprising a shell (D) enclosing a hollow interior; a tube (Lamp A) having a first open end (22) and a second open end (24) and a continuous pathway communicating between said first open end and said second open end, said tube intersecting with said shell such that said first open end and said second open end reside outside said shell and a portion of said tube between said first open end and said second open end resides within said shell, each said intersection of said tube and said shell being accomplished such that any contents of said hollow interior of said shell are sealed within said shell and any contents of said hollow interior of said shell are segregated from any contents of said portion of said tube residing within said shell; and at least one electrode (a first of 36) having at least one end terminating inside said shell, see col. 3, line 27 through col. 5, line 12 and figures 1-2.

Art Unit: 3739

Regarding claims 6-10, Feldman et al. disclose the claimed invention, see col. 3, lines 27-57.

Regarding claim 13, Feldman et al. disclose the portion of said tube residing within said shell encloses a flowing substance, see col. 3, line 27 through col. 5, line 12 and figures 1-2.

Regarding claims 15, 17 and 18, Feldman et al. disclose the claimed invention, see col. 3, line 27 through col. 5, line 12 and figures 1-2.

Regarding claim 19, Feldman et al. further disclose a source of electromagnetic waves (a second of 36), said source of electromagnetic waves positioned such that electromagnetic waves emanating from said source of electromagnetic waves pass through said shell, see col. 3, line 27 through col. 5, line 12 and figures 1-2.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3739

Claims 2, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman et al. (USPN 5,896,004) as applied to claim 1 above, and further in view of Oga et al. (USPN 5,824,130).

Regarding claims 2, 4 and 5, Feldman et al. disclose the claimed invention except for the portion of said tube residing within said shell is configured as a spiral comprising a plurality of concentric turns, the spiral comprises three or more concentric turns and/or the spiral comprises a prime number of concentric turns. Oga et al. disclose a bulb comprising a shell (100) enclosing a hollow interior and an inner tube (1) inside the hollow interior and teach providing the tube with a spiral shape having three turns in order to enhance filling and light generation, see col. 1, lines 46-53, col.5-7 and figures 1-7. Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify the invention of Feldman et al., as taught by Oga et al., to provide the tube with a spiral shape having three turns in order to enhance filling and light generation.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman et al. (USPN 5,896,004) in view of Oga et al. (USPN 5,824,130) as applied to claim 2 above, and further in view of Soules et al. (USPN 5,680,005).

Regarding claim 3, Feldman et al. in view of Oga et al. disclose the claimed invention except for each successive concentric turn of the plurality of concentric turns decreases in

diameter. Soules et al. disclose a bulb (A) having a tube (B) bulb with a gas filled and teach providing the with a helix/spiral configuration with decreasing diameter "in order to maximize the length of discharge tubing for a given height," see abstract and figures 1 and 2. Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify the invention of Feldman et al. in view of Oga et al., as taught by Soules, to provide the bulb with tube having a helix/spiral configuration with decreasing diameter "in order to maximize the length of discharge tubing for a given height."

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman et al. (USPN 5,896,004) as applied to claim 7 above, and further in view of Okubo (USPN 5,617,659).

Regarding claims 11 and 12, Feldman et al. disclose the claimed invention except for the noble gas comprises neon and/or helium. Okubo discloses a discharge bulb 18 and teaches the alternate/equivalence of neon, helium and argon as a discharge gas, see col. 6, lines 54-60. Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify the invention of Feldman et al., as taught by Okubo, to use neon and/or helium inside the discharge tube as an alternative to argon.

Art Unit: 3739

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman et al. (USPN 5,896,004) as applied to claim 13 above, and further in view of Lapatovich et al. (USPN 6,696,788).

Regarding claim 14, Feldman et al. disclose the claimed invention except for the hollow interior of said shell outside said tube contains a gaseous matter, and wherein said flowing substance does not intermingle with said gaseous matter. Lapatovich et al. disclose a double jacket bulb (10) having an exterior shell (16) and an interior discharge tube/jacket (12) and electrodes 30 and 32 and teach providing a gas (22) in the outer shell (16) such that when activated by heat and radiation from inner tube, when the lamp is operating, converts radiation, from one wavelength to another, see col. 2, line 60 through col. 3, line 49 and figures 1-7. Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify the invention of Feldman et al., as taught by Lapatovich et al., to provide a gas in the outer shell such that when activated by heat and radiation from inner tube, when the lamp is operating, converts radiation, from one wavelength to another.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman et al. (USPN 5,896,004).

Regarding claim 16, Feldman et al. disclose the claimed invention except for the ozone. Applicant discloses various gaseous substances within the tube, see claims 8-12.

Additionally, Applicant discloses on page 15, lines 3-5 “the material flowing through vortex tube 23 comprises ozone, but the material does not necessarily have to be ozone or a gas.” Therefore, by Applicant’s own admission, ozone is not seen as distinct over any of the other claimed gases.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman et al. (USPN 5,896,004) in view of Imamura et al. (USPN 4,603,277).

Regarding claim 27, Feldman et al. disclose a bulb comprising a shell (D) enclosing a hollow interior; a tube (Lamp A) having a first open end (22) and a second open end (24) and a continuous pathway communicating between said first open end and said second open end, said tube intersecting with said shell such that said first open end and said second open end reside outside said shell and a portion of said tube between said first open end and said second open end resides within said shell, each said intersection of said tube and said shell being accomplished such that any contents of said hollow interior of said shell are sealed within said shell and any contents of said hollow interior of said shell are segregated from any contents of said portion of said tube residing within said shell; and at least one electrode (a first of 36) having at least one end terminating inside said shell, see col. 3, line 27 through col. 5, line 12 and figures 1-2. Feldman et al. disclose the claimed invention except for the plurality of tubes. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have more than one tube, since it has been held that mere duplication of the essential working parts of a

Art Unit: 3739

device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ

8. As an example, Imamura et al. discloses a bulb apparatus comprising an outer shell (outer bulb 30) and teach providing the bulb apparatus with a plurality of inner discharge tubes (the two tubes numbered 1, in figures 1 and 2) in order to provide high density light, see col. 1 and 2 and figures 1-7. Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify the invention of Feldman et al., as is well known in the art and taught by Imamura et al., to provide the bulb apparatus with a plurality of inner discharge tubes in order to provide high density light.

Allowable Subject Matter

Claims 20 and 24 have objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-19 and 27 have been considered but are moot in view of the new ground(s) of rejection.

This action is made NON-FINAL.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron Roane whose telephone number is (571) 272-4771. The examiner can normally be reached on Monday-Thursday 7AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Aaron Roane
June 7, 2007

A.R.

Roy D. Gibson
ROY D. GIBSON
PRIMARY EXAMINER